

Applying the CMMI for Services to the Process Group (Physician, Heal Thyself!)

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- **A common criticism of the process group is we don't follow our own advice – we don't adopt the level of discipline required by CMMI in planning, tracking, measuring, and auditing our own activities**
- **The new CMMI for Services provides a powerful tool for assessing and guiding a process group in becoming more mature and capable**
- **This presentation will look at applying the CMMI for Services model to the process group, treating their functions as a service provided to the organization**

Looking for Process Group Best-Practices

- Up to now, most process groups have based their activities on the Process Management process areas in the CMMI for Development model

Org. Process Focus

SG 1 Determine Process Improvement Opportunities

- SP 1.1 Establish Organizational Process Needs
- SP 1.2 Appraise the Organization's Processes
- SP 1.3 Identify the Organization's Process Improvements

SG 2 Plan and Implement Process Improvements

- SP 2.1 Establish Process Action Plans
- SP 2.2 Implement Process Action Plans

SG 3 Deploy Organizational Process Assets and Incorporate Lessons Learned

- SP 3.1 Deploy Organizational Process Assets
- SP 3.2 Deploy Standard Processes
- SP 3.3 Monitor Implementation
- SP 3.4 Incorporate Process-Related Experiences into the Organizational Process Assets

Org. Process Definition

SG 1 Establish Organizational Process Assets

- SP 1.1 Establish Standard Processes
- SP 1.2 Establish Lifecycle Model Descriptions
- SP 1.3 Establish Tailoring Criteria and Guidelines
- SP 1.4 Establish the Organization's Measurement Repository
- SP 1.5 Establish the Organization's Process Asset Library
- SP 1.6 Establish Work Environment Standards

SG 2 Enable IPPD Management

- SP 2.1 Establish Empowerment Mechanisms
- SP 2.2 Establish Rules and Guidelines for Integrated Teams
- SP 2.3 Balance Team and Home Organization Responsibilities

Generic Goals and Practices

GG 2 Institutionalize a Managed Process

- GP 2.1 Establish an Organizational Policy
- GP 2.2 Plan the Process
- GP 2.3 Provide Resources
- GP 2.4 Assign Responsibility
- GP 2.5 Train People
- GP 2.6 Manage Configurations
- GP 2.7 Identify and Involve Relevant Stakeholders
- GP 2.8 Monitor and Control the Process
- GP 2.9 Objectively Evaluate Adherence
- GP 2.10 Review Status with Higher Level Management

GG 3 Institutionalize a Defined Process

- GP 3.1 Establish a Defined Process
- GP 3.2 Collect Improvement Information

What Would it Mean to Treat the Process Group as a Service Provider?

- “The CMMI-SVC model provides guidance for the application of CMMI best practices by the service provider organization. Best practices in the model focus on activities for providing quality services to the customer and end users.”
– *CMMI for Services, v1.2*

Project Management

- Requirements Management
- Project Planning
- Project Monitoring and Control
- Supplier Agreement Management
- Integrated Project Management
- Risk Management
- Quantitative Project Management

Support

- Configuration Management
- Process and Product Quality Assurance
- Measurement and Analysis
- Decision Analysis and Resolution
- Causal Analysis and Resolution

Process Management

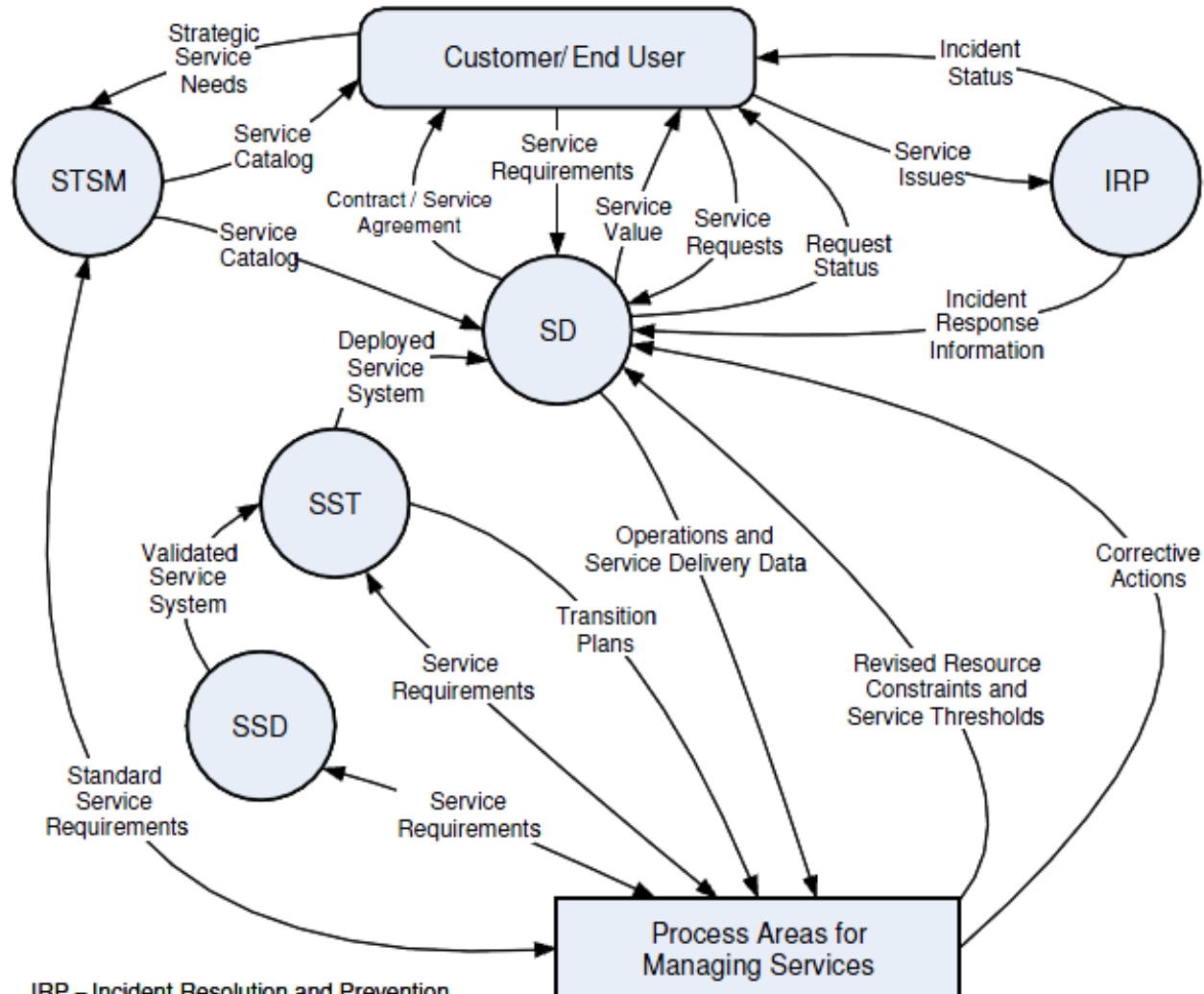
- Organizational Process Focus
- Organizational Process Definition
- Organizational Training
- Organizational Process Performance
- Organizational Innovation and Deployment

Services

- Service Delivery
- Capacity & Availability Management
- Incident Resolution & Prevention
- Service System Transition
- Service Continuity
- Service System Development
- Strategic Service Management

- **Service - an intangible, non-storable product (e.g., operations, maintenance, logistics, and IT)**
 - Services imply on-going relationships with customers governed by service agreements
- **The process group's customers**
 - Senior management - achieving business goals
 - Projects and functional organizations
 - Producing usable products (e.g., standard organizational process, measurement repository, process asset library)
 - Services (e.g., training, assessment, coaching)
- **Service system - an integrated and interdependent combination of component resources that satisfies service requirements**
 - Everything required for service delivery (e. g., work products, processes, facilities, tools, consumables, and human resources)

A Starting Point: Significant Service Work Products



IRP = Incident Resolution and Prevention
 SD = Service Delivery
 SSD = Service System Development
 SST = Service System Transition
 STSM = Strategic Service Management

Key Concepts – Service Agreement, Service Catalog, Service Level Agreement

- **Service agreement – a binding, written record of a promised exchange of value between a service provider and a customer**
 - Process Improvement Plan??
- **Service catalog – a list or repository of standardized service definitions**
- **Service level agreement – a service agreement that specifies delivered services; service measures; levels of acceptable and unacceptable services; and expected responsibilities, liabilities, and actions of both the provider and customer in anticipated situations**
 - E.g., availability, responsiveness

Key Concepts – Service Request, Service Incident

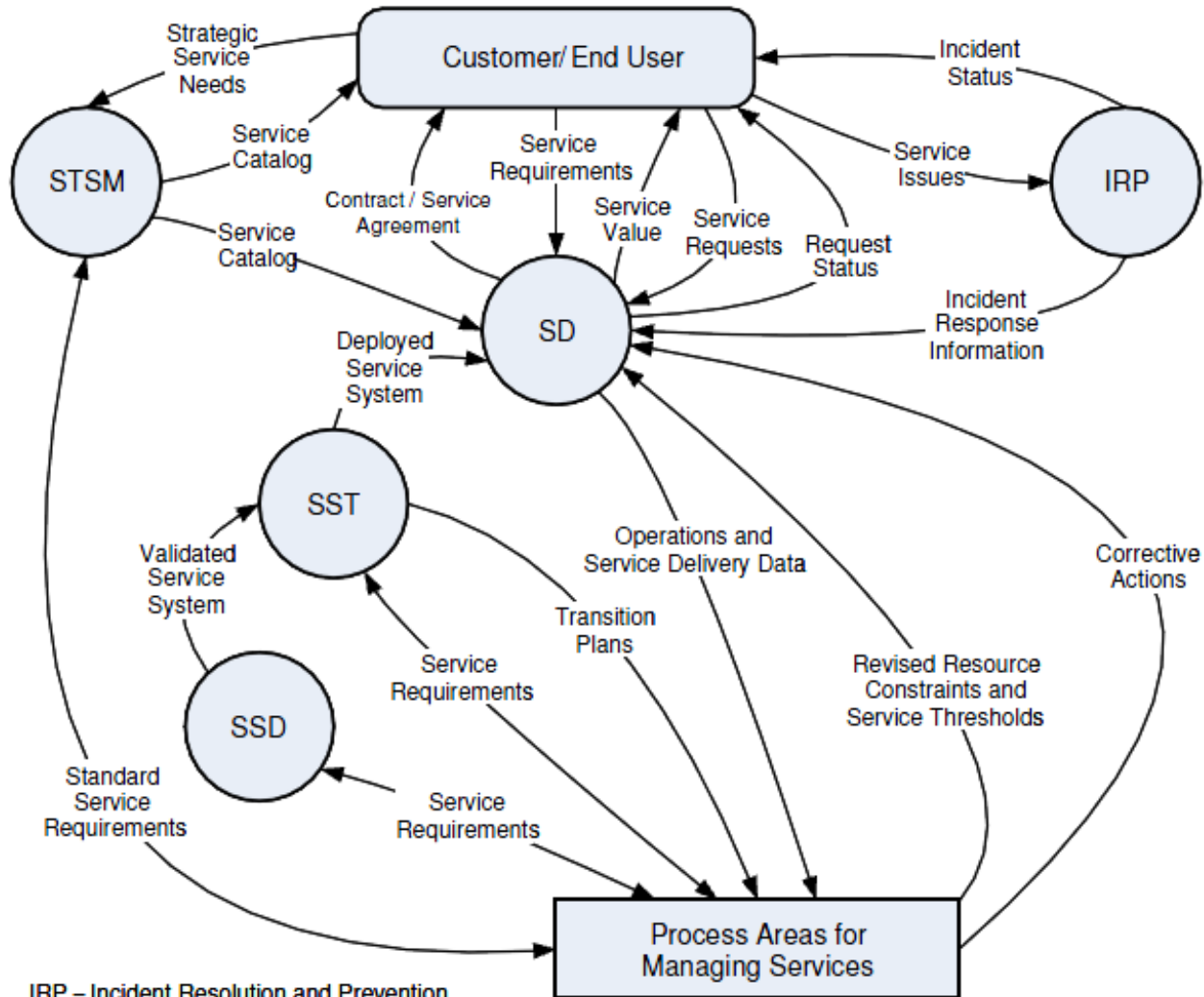
- **Service request – a communication from a customer or end user that one or more specific instances of service delivery are desired**
 - For senior management, these are likely to be scheduled in a plan (release of process assets, appraisal, status reports)
 - For projects and functional groups, the service agreement should make clear what services are available (e.g., assistance in putting together a PIID)
- **Service incident – an indication of an actual or potential interference with a service**
 - E.g., process group personnel not available/capable, process asset doesn't live up to expectations

Which Process Areas Might be Challenging to Implement?

Project Management	Support	Process Management	Services
<ul style="list-style-type: none">• Requirements Management• Project Planning• Project Monitoring and Control• Supplier Agreement Management? Integrated Project Management• Risk ManagementX Quantitative Project Management	<ul style="list-style-type: none">• Configuration Management• Process and Product Quality Assurance• Measurement and Analysis• Decision Analysis and ResolutionX Causal Analysis and Resolution	<ul style="list-style-type: none">? Organizational Process Focus? Organizational Process Definition? Organizational TrainingX Organizational Process PerformanceX Organizational Innovation and Deployment	<ul style="list-style-type: none">• Service Delivery• Capacity & Availability Management• Incident Resolution & Prevention• Service System Transition• Service Continuity• Service System Development• Strategic Service Management

? Confusing; X Difficult

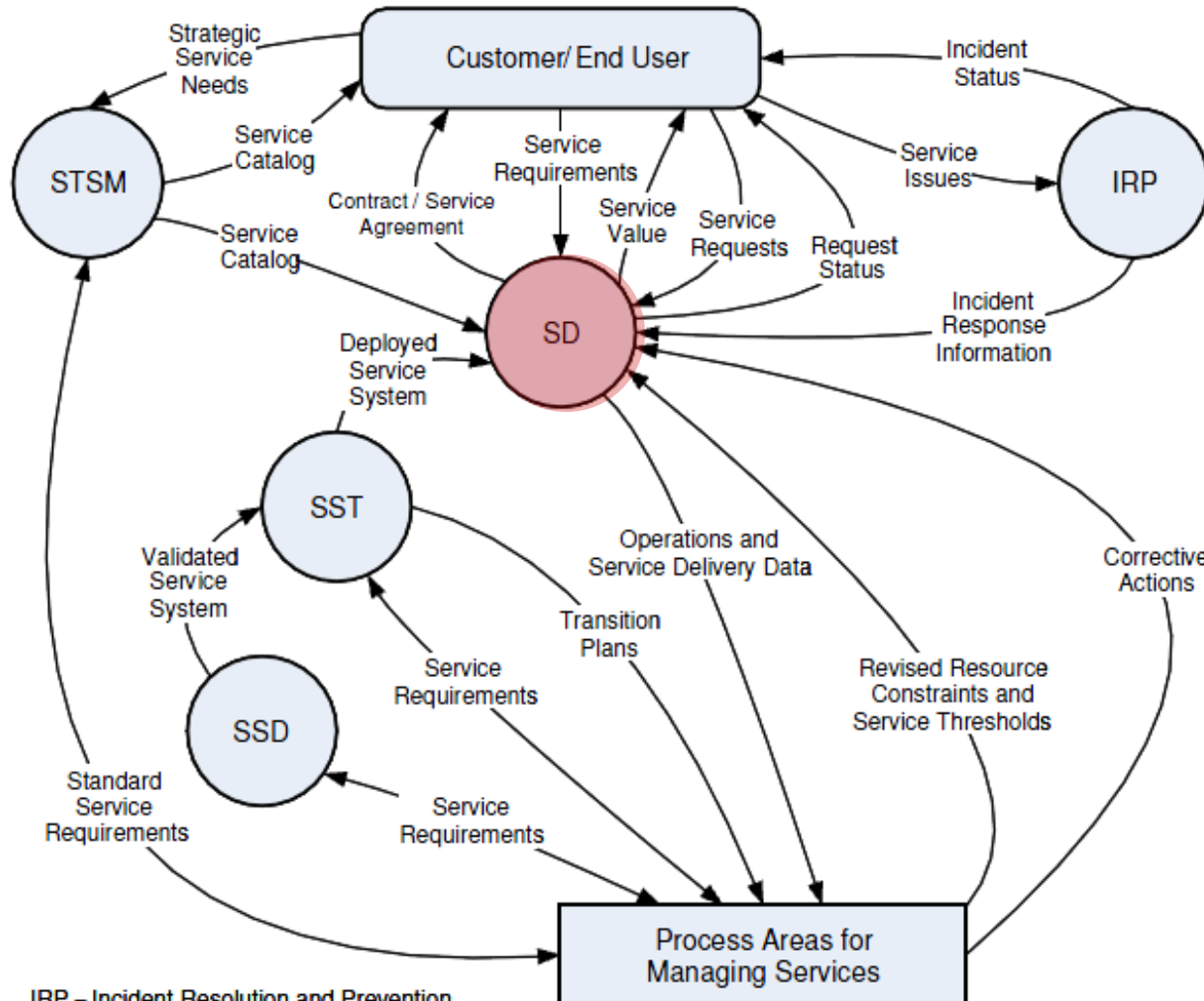
Key Process Area Relationships for Establishing and Delivering Services



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Service Delivery (SD)

Deliver services in accordance with service agreements



Activities

- Establishing and maintaining service agreements
- Preparing and maintaining a service delivery approach
- Preparing for service delivery
- Delivering services
- Receiving and processing service requests
- Maintaining service systems

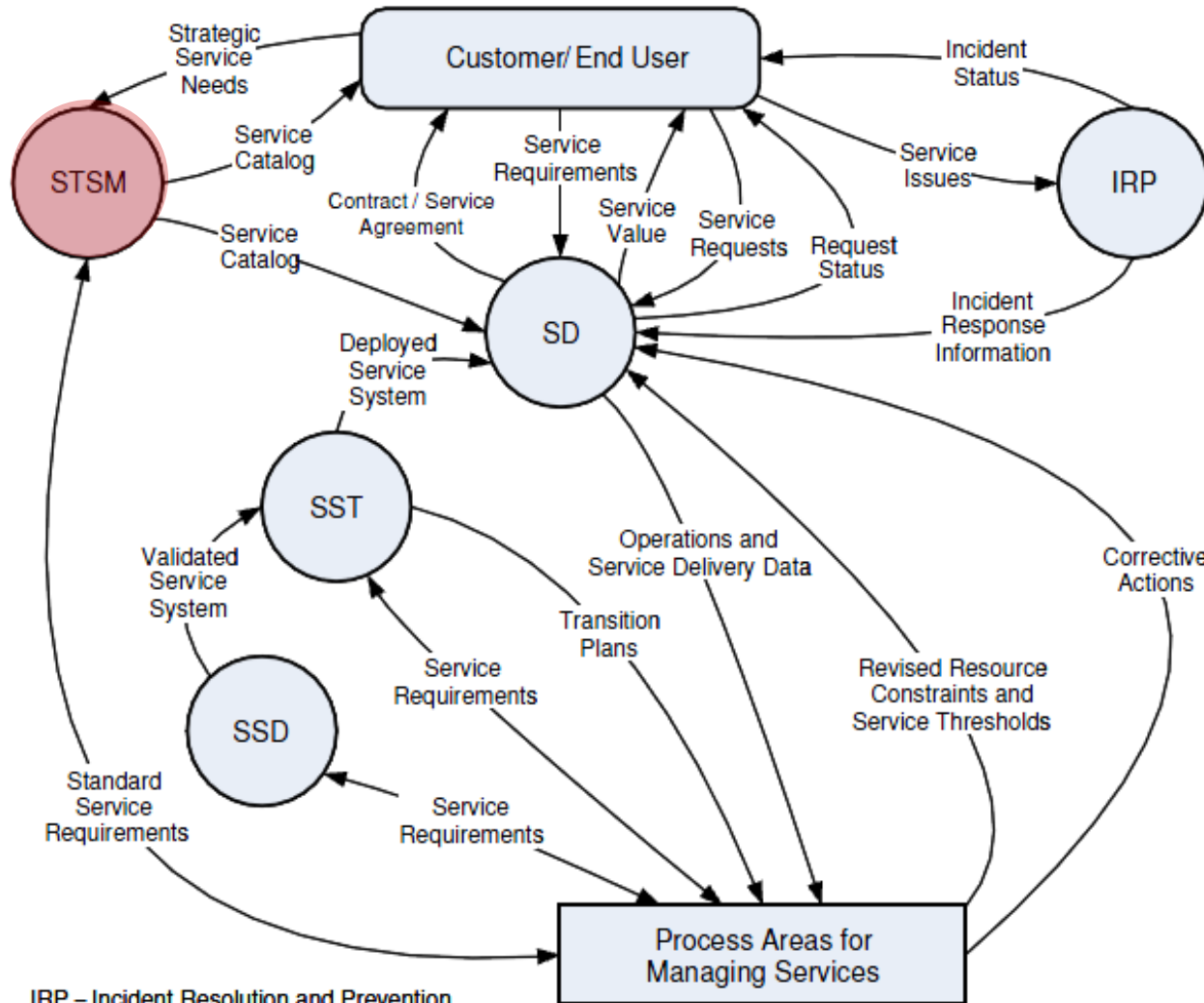
Key Questions

- Who is the customer(s)?

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Strategic Service Management (STSM)

Establish and maintain standard services in concert with strategic needs and plans



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Activities

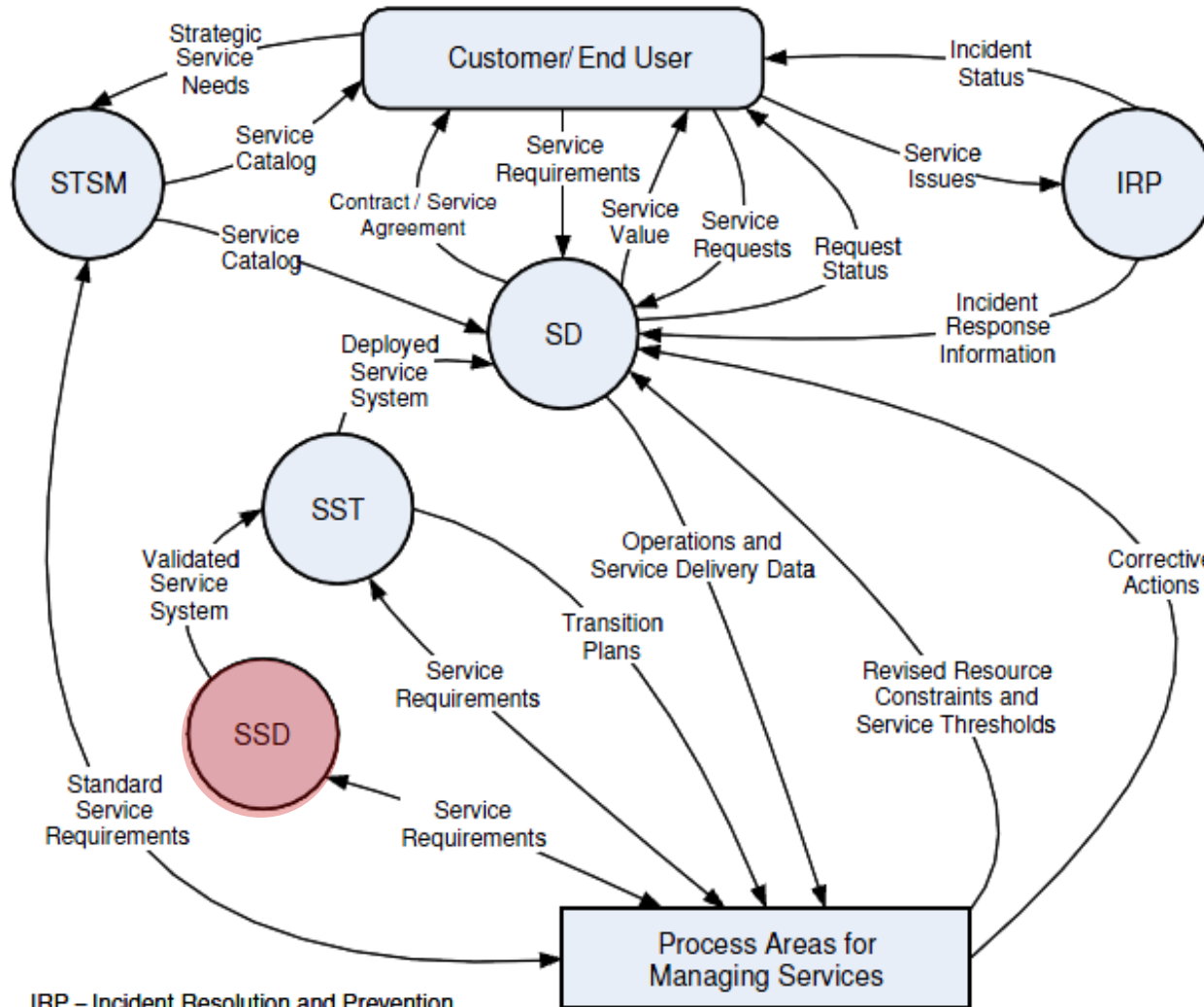
- Analyzing capabilities and needs for services that span multiple customers and agreements
- Establishing and maintaining standard services, service levels, and descriptions that reflect these capabilities and needs

Key Questions

- What does “service level” mean in this context?
- What items are appropriate for the process group’s service catalog?

Service System Development (SSD)

Analyze, design, develop, integrate, verify, and validate service systems, to satisfy existing or anticipated service agreements



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Activities

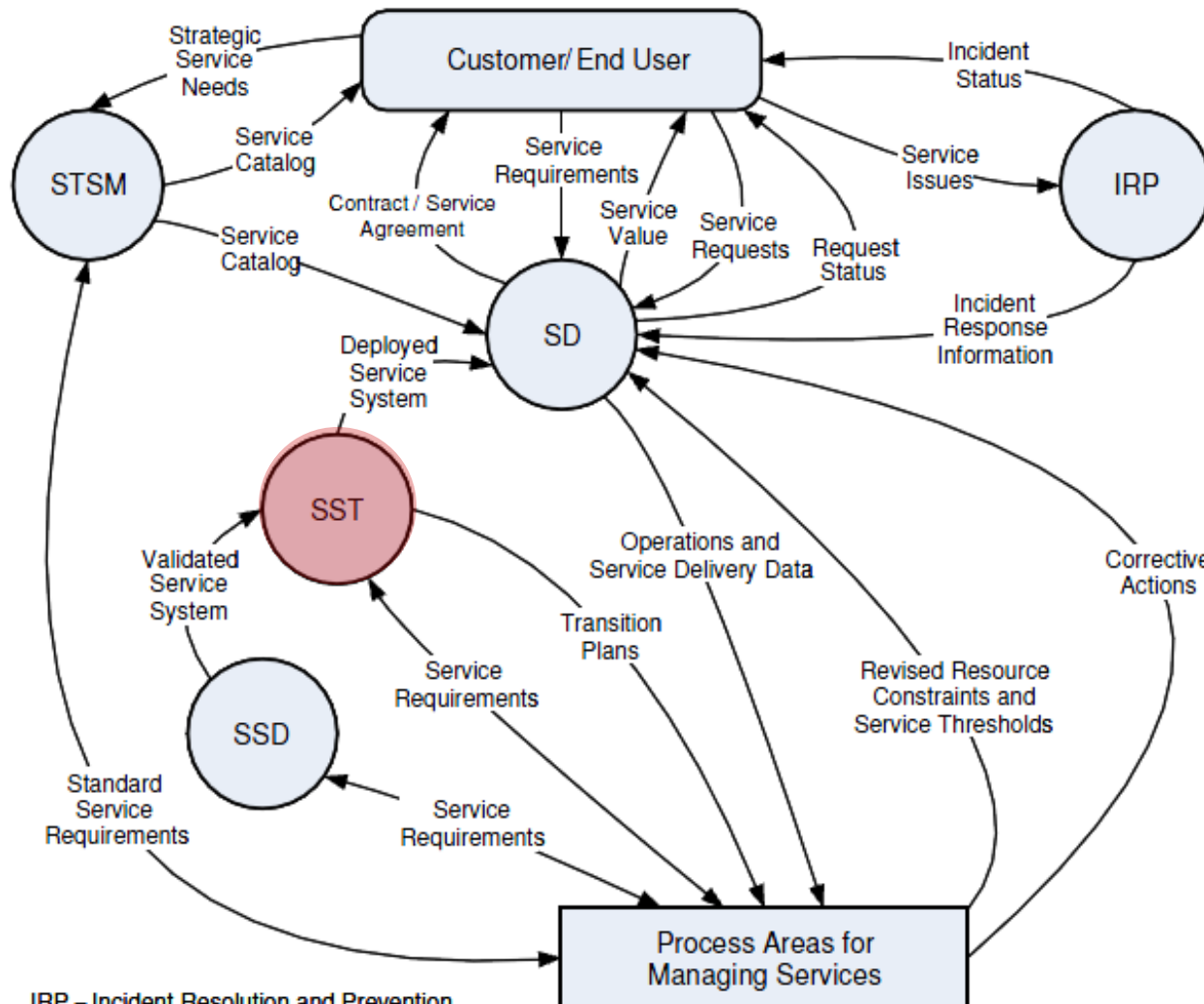
- Collecting, coordinating, analyzing, validating, and allocating stakeholder requirements for service systems
- Evaluating and selecting from alternative service system solutions
- Designing and building, integrating, and documenting service systems
- Verifying and validating service systems to confirm they satisfy their intended requirements and customer and end-user expectations

Key Questions

- Applying development rigor

Service System Transition (SST)

Deploy new or significantly changed service system components while managing their effect on ongoing service delivery.



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Activities

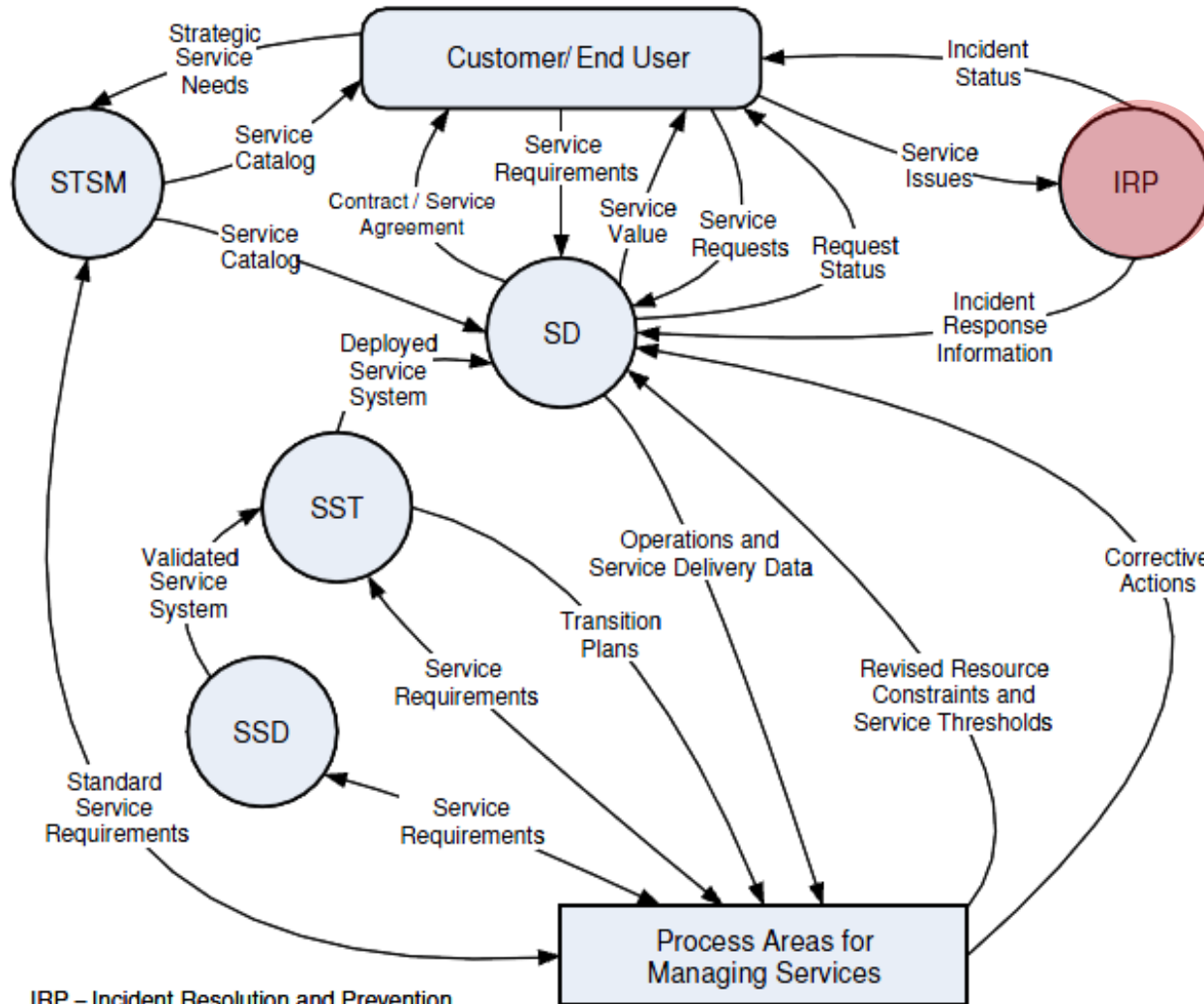
- Configuration control of service system components
- Management of internal and external interfaces
- Deployment of service system components into the delivery environment
- Stakeholder acceptance of new or revised service system components
- Management of impacts of the transition

Key Questions

- What are “new or significantly changed service system components”?

Incident Resolution and Prevention (IRP)

Ensure timely and effective resolution of service incidents and prevention of service incidents as appropriate



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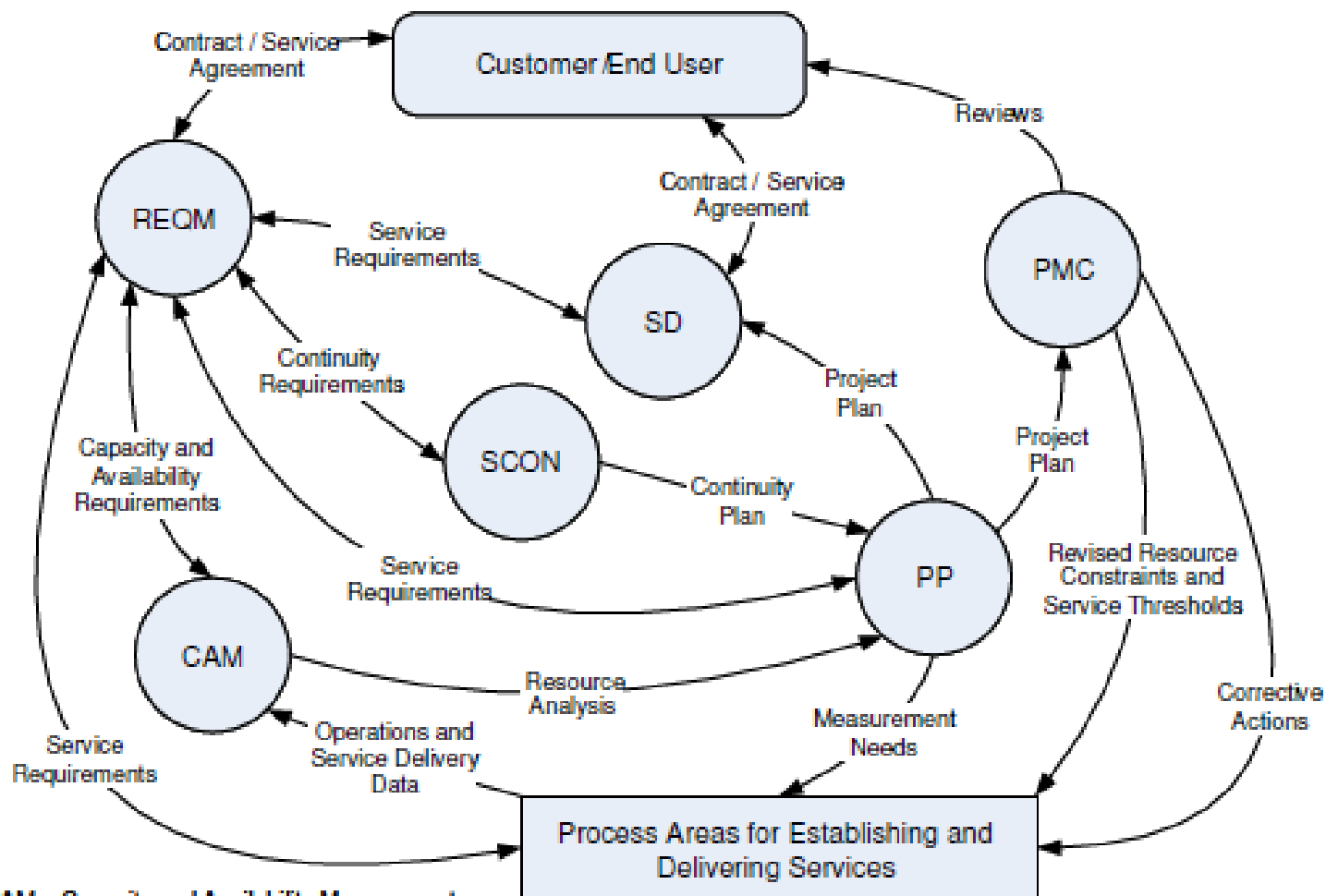
Activities

- Identifying and analyzing service incidents
- Initiating specific actions to address incidents
- Monitoring the status of incidents
- Identifying and analyzing the underlying causes of incidents
- Validating the complete resolution of incidents with relevant stakeholders

Key Questions

- What are legitimate “service incidents”?

Key Process Area Relationships for Service Management



CAM – Capacity and Availability Management
PMC – Project Monitoring and Control
PP – Project Planning
REQM – Requirements Management
SCON – Service Continuity
SD – Service Delivery

- **Much to learn from the perspective of a process group as a service organization...**
- **More to learn from the application of CMMI-SVC to process group activities...**
- **Even more to do if we want to demonstrate the same discipline in our work that we demand of others...**